

**Notice of Allowability**

Application No.

09/446,523

Examiner

Joseph W. Drodge

Applicant(s)

ALTMAYER ET AL.

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the Appeal Brief filed June 14, 2004.
2. ☒ The allowed claim(s) is/are 26-41, now renumbered claims 1-16.
3. ☒ The drawings filed on 28 December 1999 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
  1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS ( as "replacement sheets" ) must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948 ) attached
    - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
  - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413),  
Paper No./Mail Date 0804.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

### EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mark Bicks on August 5, 2004.

The application has been amended as follows:

Claims 10-25 have been cancelled and replaced with the following claims: --

26. A method of assembling a filter element, comprising the steps of:  
forming a plastic filter casing with openings from a flat blank with opposite ends thereof bent towards one another; and joining said opposite ends together by a sealing seam;  
folding a resilient mat filter into a cylindrical shape, and pushing said mat filter open on a fluid-permeable supporting pipe to surround and engage said supporting pipe, said cylindrical shape of said mat filter having an exterior diameter prior to introduction into said casing larger than an interior diameter of said filter casing along an entire axial length of said mat filter;  
forming one axial end of said mat filter into a conical shape to facilitate introduction thereof into said filter casing;  
after forming said one axial end into a conical shape, introducing said mat filter and said pipe into said filter casing delimiting a filter chamber; and  
connecting two end caps to said filter casing;  
whereby, said mat filter is supported directly on said filter casing and said supporting pipe.

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27. A method according to claim 26 wherein  
said ends of said filter casing are joined by a heat seal to form said sealing seam.
28. A method according to claim 26 wherein  
said ends of said filter casing are joined by a heating element to form said sealing seam.
29. A method according to claim 26 wherein  
said ends of said filter casing are joined by an ultrasonic weld to form said sealing seam.
30. A method according to claim 26 wherein  
said mat filter is pleated, comprises plastic material, and comprises an additional filter fold with  
a flush arrangement of mat filter edges on one another allowing said mat filter edges to be tightly  
joined.
31. A method according to claim 30 wherein  
said mat filter edges are joined by an ultrasonic weld.
32. A method according to claim 30 wherein  
said mat filter edges are joined by a heat seal.
33. A method according to claim 26 wherein  
said filter casing consists of recyclable plastic material.
34. A method according to claim 33 wherein  
said end caps consist of recyclable plastic material.
35. A method according to claim 34 wherein  
said supporting pipe consists of recyclable plastic material.
36. A method according to claim 33 wherein  
said supporting pipe consists of recyclable plastic material.

37. A method according to claim 26 wherein  
said openings in said plastic filter casing are formed by punching out devices.
38. A method according to claim 37 wherein  
said openings are circular.
39. A method according to claim 26 wherein  
said sealing seam comprises intermittent contact points of said ends of said filter casing.
40. A method according to claim 26 wherein  
said sealing seam comprises an overlapping area of said ends of said filter casing.
41. A method according to claim 26 wherein  
prior to introduction onto said supporting pipe, said mat filter has an interior diameter less than  
an exterior diameter of said supporting pipe along an entire axial length of said mat filter. —

In the Specification, on page 1 -- This application is a 371 of PCT/EP97/04630 filed  
08/25/1997. -- has been inserted immediately below the Title.

The Title has been changed to -- METHOD OF ASSEMBLING PLASTIC FILTER  
ELEMENT WITH PLASTIC CASING --.

The following Abstract has been inserted after the claims. –

A method of assembling a filter element includes the initial step of forming a plastic filter casing with openings from a flat blank with opposite ends thereof bent towards one another and joining these opposite ends together by a sealing seam. Also, a resilient mat filter is folded into a cylindrical shape and pushed open on a fluid-permeable supporting pipe to surround and engage the surrounding pipe. The cylindrical shape of the mat filter has an exterior diameter prior to introduction into the casing that is larger than an interior diameter of the filter casing along the entire axial length of the mat filter. The mat filter is folded into a conical shape to facilitate its introduction thereof into the filter casing. After the axial end is formed, the mat filter and supporting pipe are introduced into the filter casing to define a filter chamber. Finally, two end caps are joined to the filter casing. --.

The following is an examiner's statement of reasons for allowance: Independent claim 26, and thus claims dependent therefrom, now distinguish over all of the prior art of record, especially Miller patent 4,609,465 and GB publication 2,007,992 and also over newly cited Fall et al patent 5,539,370; Paas patent 5,431,706 and Tokar et al patent 4,243,397 deemed to constitute the closest prior art. The claims distinguish over such prior art in view of combination of recitations: "method of assembling...mat filter having an exterior diameter prior to introduction into said casing larger than an interior diameter of said filter casing along an entire axial length of said filter...one axial end...conical shape...after forming...conical shape, introducing said mat filter and said supporting pipe into said filter casing". The forementioned prior art does not suggest an axial end of a mat filter, having a relatively larger diameter, being formed into a conical shape and then being introduced with a supporting pipe into a filter casing of relatively smaller diameter.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

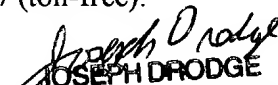
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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph Drodge at telephone number 571-272-1140. The examiner can normally be reached on Monday-Friday from 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda Walker, can be reached at 571-272-1151. The fax phone number for the examining group where this application is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either private PAIR or Public PAIR, and through Private PAIR only for unpublished applications. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have any questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JWD

  
JOSEPH DRODGE  
PRIMARY EXAMINER

August 5, 2004